

## ***Salvador A. Gezan, Ph.D.***

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**Profile:** I am a breeder/quantitative geneticists with more than 20 years of experience in breeding, statistical analysis and genetic improvement consulting. Currently I am an Assistant Professor at the University of Florida, USA, and I have worked with many breeding programs that apply traditional and molecular tools with support on quantitative analyses, with the aim of defining breeding strategies to optimize and accelerate the release of outstanding genotypes.

My experience with several agricultural, forestry and animal public and private breeding programs also includes optimization of resources for design and analysis of breeding experiments, develop pipelines for molecular analyses and its implementation (e.g. QTL, GWAS and Genomic Selection), and directly manage and train staff and scientist to perform breeding activities on a routine basis. My research work, while affiliated to universities or research institutes, has focused in linear mixed models and its applications to genetics and breeding particularly on developing algorithm and analytical solutions to quantitative genetics.

Overall, with my quantitative skills I am able to analyze, exploit and interpret complex data that is required for an array of decisions in different fields, including agronomy, aquaculture, entomology and medical sciences, among some areas. Overall, I am always looking for optimization challenges that have direct application for operational commercial decisions.

**Expertise Areas:** Breeding strategies  
Quantitative genetics  
Mixed models and design of experiments  
Statistical and numerical methods

**Expertise Organisms:** *Animal:* Atlantic Salmon, Coho Salmon, Oyster, Pig, Clams, Cattle, Human  
*Plant:* Sugarcane, Cocoa, Bean, Corn, Strawberry, Blueberry, Rubber, Grape, Peanut, Pine, Eucalyptus, Poplar, Willow, Rice, Turfgrass

**Education:** Ph.D. majoring in Statistics and Genetics. University of Florida (2001-2005). Thesis title: *Optimal design and analysis of clonal forestry trials using simulated data.*

**Employment:** **Assistant Professor** of Quantitative Genetics/Biometrics. School of Forest Resources and Conservation (SFRC), University of Florida, Institute of Food and Agricultural Sciences (IFAS), Gainesville, Florida (June 2011 – present).

**Consultant** Statistician/Quantitative Geneticist (July 2010 – present).

**Visiting Scientist** at Rothamsted Research, Harpenden, United Kingdom (July 2010 – June 2011).

**Statistician/Quantitative Geneticist** at VSN International (ASReml – GenStat). Hemel Hempstead, United Kingdom (January 2011 – June 2011).

**Lecturer**, Department of Statistics, College of Agricultural and Life Sciences, IFAS, University of Florida, USA. (Sept. 2008 – June 2010).

### Teaching (as single instructor):

- Assistant Professor at SFRC, University of Florida. Teaching Forest Mensuration (FOR 3430C) for undergraduate students, Introduction to Quantitative Genetics (PCB 6555) and Introduction to Linear Mixed Models (FOR 6934) both oriented towards graduate students.
- Lecturer at IFAS-Statistics, University of Florida, USA. Courses oriented to non-statistical major graduate level Master and Ph.D. students including Statistical Methods in Research I and II (STA6166 and STA6167). (Sep 2008 – June 2010).
- Instructor at Rothamsted Research, Harpenden, United Kingdom. Several short courses oriented to scientist and Ph.D. students such as: Introduction to Regression, Basic statistics and introduction to GenStat, Generation of Experimental Designs with CycDesign and The Design and Analysis of Simple Experiments. (Jan 2006 – August 2008).

### Workshops (as single instructor):

- Analysis of Breeding Trials using ASReml (with emphasis on Breeding Trials). Offered 12 times from 2009 to 2018, in: USA (6), Canada (1), Brazil (2), Chile (3), Argentina (1), Germany (2), France (1).
- Linear models for plant scientist with ASReml-R. American Society of Agronomy Workshop. Florida, USA. October 2017.
- Linear mixed models applied to the agricultural research using the R software Workshop (In Spanish). Temuco, Chile. November 2017.
- Implementing genomic selection in plant breeding programs. American Society of Agronomy Workshop. Arizona, USA. November 2016.
- Introduction to Statistical Techniques for Biological Scientists with R. Offered in 2013 in Brazil (1) and Chile (1).
- Designing Experiments for Biological Studies using CycDesign. Offered from 2007-2014 in: USA (2), UK (1).

### Publications:

(Peer Reviewed, total of 86)

- Dias, K.O.D.G., **Gezan, S.A.**, Guimarães, C.T, Parentoni, S.N., Guimareas, P.E. de O., Carneiro, N. P., Portugal, A.F., Bastons, E.A., Cardoso, M.J., Anoni, C. de O., de Magalhaes, J.V., de Souza, J.C., Guimaraes, L.J.M and Pastina, M.M. 2018. Estimating genotype x environment interaction for and genetic correlations among drought tolerance traits in maize via factor analytic multiplicative mixed models. *Crop Science* 58:1-12; doi: 10.2135/cropsci2016.07.0566
- Dias, K.O.D.G, **Gezan, S.A.**, Guimarães, C.T, Nazarian, A., Silva, L. de C., Parentoni, S.N., Guimareas, P.E. de O., Anoni, C. de O., Padua, J.M.V., Pinto, M. de O., Noda, R.W., Ribeiro, C.A.G., de Magalhaes, J.V., Garcia, A.A.F., de Souza, J.C., Guimaraes, L.J.M., Pastina, M.M. 2018. Improving accuracies of genomic predictions for drought tolerance in maize by joint modelling of additive and dominance effects in multi-environment trials. *Heredity*, doi.org/10.1038/s41437-018-0053-6
- Holderman, C.J., **Gezan, S.A.**, Stone, A.E.S., Connelly, C.R., and Kaufman, P.E. 2018. Mosquitoes (Diptera: Culicidae) collected from residential yards and dog kennels in Florida using two aspirators, a sweep net, or a CDC trap. *Journal of Medical Entomology*; doi: 10.1093/jme/tjx171
- McElroy, M.S., Navarro, A.J.R., Mustiga, G., Stack, C., **Gezan, S.**, Pena, G., Sarabia, W., Saquicela, D., Sotomayor, I., Douglas, G.M., Migocovsky, Z., Amores, F., Tarqui, O., Myles, S., Motamayor, J.C. 2018. Prediction of cacao (*Theobroma cacao*) resistance to *Moniliophthora* spp. Diseases via genome-wide association analysis and genomic selection. *Frontiers in Plant Science* 9:343. doi: 10.3389/fpls.2018.00343
- Moulton, M.P., Cropper, W.P. Jr., Broz, A.J., and **Gezan, S.A.** 2017. Patterns of success in game bird introductions in the United States. *Biodiversity and Conservation*; doi: 10.1007/s10531-017-1475-9

- Mramba, L., Peter, G.F., Whitaker, V.M., and **Gezan, S.A.** 2018. Generating improved experimental designs with spatially and genetically correlated observations using mixed models. *Agronomy* 8(4): 40; doi:10.3390/agronomy8040040
- Agramonte, N.M., **Gezan, S.A.**, and Bernier, U. 2017. Comparative evaluation of a silicone membrane as an alternative to skin for testing mosquito repellents. *Journal of Medical Entomology* 54(3):631-637; doi: 10.1093/jme/tjw207
- Aldridge, R.L., Kaufman, P.E., Bloomquist, J.R., **Gezan, S.A.**, and Linthicum, K.J. 2017. Permethrin and malathion LD<sub>90</sub> values for *Culex quinquefasciatus* vary with application site. *Medical and Veterinary Entomology*; doi: 10.1111/mve.12236
- Aldridge, R.L., Kaufman, P.E., Bloomquist, J.R., **Gezan, S.A.**, and Linthicum, K.J. 2017. Application site and mosquito age influences malathion- and permethrin-induced mortality in *Culex quinquefasciatus* (Diptera: Culicidae). *Journal of Medical Entomology* 54(6):1692-1698; doi: 10.1093/jme/tjx160
- Bhakta, M.S., **Gezan, S.A.**, Clavijo-Michelangeli, J.A., Carvalho, M., Zhang, L., Jones, J.W., Boote, K.J., Correll, M.J., Beaver, J., Osorno, J.M., Colbert, R., Rao, I., Beebe, S., Gonzalez, A., Ricaurte, J., and Vallejos, C.E. (Submitted). A predictive model for time-to-flowering in the common bean based on QTL and environmental variables. *G3: Genes, Genomes, Genetics* 7(12):3901-3912; doi: 10.1534/g3.117.300229
- Carnohan, L.P., Kaufman, P.E., Allan, S.A., **Gezan, S.A.**, and Weeks, E.N.I. 2017. Laboratory and field evaluation of brown dog tick behavioral responses to potential semiochemicals. *Ticks and Tick-borne Diseases* 8:226-234
- DuVal, A., **Gezan, S.A.**, Mustiga, G., Stack, C., Marelli, J.-P., Chaparro, J., Livingstone D. III, Royaert, S., and Motamayor, J.C. 2017. Genetic parameters and the impact of off-types for *Theobroma cacao* L. in a breeding program in Brazil. *Frontiers in Plant Science* 8:2059; doi: 10.3389/fpls.2017.02059
- Gezan, S.A.**, Pisaroglo de Carvalho, M., and Sherrill, J. 2017. Statistical methods to explore genotype-by-environment interaction for loblolly pine clonal trials. *Tree Genetics & Genomes* 13:1; doi: 10.1007/s11295-016-1081-0
- Gezan, S.A.**, Osorio, L.F., Verma, S., and Whitaker, V.M. 2017. An experimental validation of genomic selection in octoploid strawberry. *Horticulture Research* 4:16070; doi: 10.1038/hortres.2016.70
- Hwang, C., Correll, M.J., **Gezan, S.A.**, Zhang, L., Bhakta, M.S., Vallejos, C.E., Boote, K.J., Clavijo-Michelangeli, J.A., and Jones, J.W. 2017. Next generation crop models: A modular approach to model early vegetative and reproductive development of the common bean (*Phaseolus vulgaris* L.). *Agricultural Systems* 155:225-239
- Lorca, G.L., Marcial, G., Ford, A., **Gezan, S.**, Perry, D., Haller, M., Wasserfall, C., Brusko, T., Atkinson, M., Gonzalez, C., and Dahl, W. 2017. Immunological effects of *Lactobacillus johnsonii* N6.2 in healthy adults: A double-blind, randomized trial. *FASEB Journal* 31:454.2
- Marcial, G.E., Ford, A.L., Haller, M.J., **Gezan, S.A.**, Harrison, N.A., Cai, D., Meyer, J., Perry, D.J., Atkinson, M.A., Wasserfall, C.H., Garrett, T., Gonzalez, C.F., Brusko, T.M., Dahl, W.J., and Lorca, G.L. 2017. *Lactobacillus johnsonii* N6.2 modulates the host immune responses: A double-blind, randomized trial in healthy adults. *Frontiers in Immunol.* 8:655. doi: 10.3389/fimmu.2017.00655
- Moreno, P.C., **Gezan, S.A.**, Palmas, S., Escobedo, F.J., Cropper, W.P. 2017. Individual-tree diameter growth models for mixed *Nothofagus* second growth forests in southern Chile. *Forests* 8, 506; doi: 10.3390/f8120506
- Quesada, T., Parisi, L.M., Huber, D.A., **Gezan, S.A.**, Martin, T.A., Davis, J.M. and Peter, G.F. 2017. Genetic control of growth and shoot phenology in loblolly pine (*Pinus taeda* L.) clonal trials. *Tree Genetics & Genomes* 13:65. doi: 10.1007/s11295-017-1143-y
- Singh, J., Clavijo-Michelangeli, J.A., **Gezan, S.A.**, Lee, H., and Vallejos, C.E. 2017. Maternal effects on seed and seedling phenotypes in reciprocal F<sub>1</sub> hybrids of the common bean (*Phaseolus vulgaris* L.). *Frontiers in Plant Science* 8:42. doi: 10.3389/fpls.2017.0042
- Whitaker, V.M., Lee, S., Osorio, L.F., Verma, S., Roach, J.A., Mangandi, J., Noh, Y.-H., **Gezan, S.A.**, Peres, N. 2017. Advances in strawberry breeding at the University of Florida. *Acta Horticulturae* 1156. doi: 10.17660/ActaHortic.2017.1156.1
- Xing, L., **Gezan, S.**, Kenworthy, K., Unruh, B., and Munoz, P.R. 2017. Improved genetic parameter estimation in zoysiagrass by implementing post hoc blocking. *Euphytica* 213:195; doi: 10.1007/s10681-017-1984-3

- Zhang, L., **Gezan, S.A.**, Vallejos, C.E., Jones, J.W., Boote, K.J., Clavijo-Michelangeli, J.A., Bhakta, M., Osorno, J.M., Rao, I., Beebe, S., Roman-Paoli, E., Gonzalez, A., Beaver, J., Ricaurte, J., Colbert, R., and Correll, M.J. 2017. Development of a QTL-environment-based predictive model for node addition rate in common bean. *Theoretical and Applied Genetics*; doi: 10.1007/s00122-017-2871-y
- Weeks, E., Machtinger, E., **Gezan, S.**, and Kaufman, P. 2017. Effect of four commercial fungal formulations on mortality and sporulation of house flies (*Musca domestica*) and stable flies (*Stomoxys calcitrans*). *Medical and Veterinary Entomology*; doi: 10.1111/mve.12201
- Aldridge, R.L., Kaufman, P.E., Bloomquist, J.R., **Gezan, S.A.**, and Linthicum, K.J. 2016. Impact of topical application site on the efficacy of permethrin and malathion to *Culex quinquefasciatus*. *Journal of the American Mosquito Control Association* 32(4):300-307
- Baniszewski, J., Cuda, J.P., **Gezan, S.A.**, Sharma, S., and Weeks, E.N.I. 2016. Stem fragment regrowth of *Hydrilla verticillata* following desiccation. *Journal of Aquatic Plant Management* 54:53-60
- Escobedo, F.J., Palmas-Perez, S., Dobbs, C., **Gezan, S.A.**, and Hernandez, J. 2016. Spatio-temporal changes in structure for a Mediterranean urban forest: Santiago, Chile 2002 to 2014. *Forests* 2016:7; doi: 10.3390/f7060121
- Kaur, N., Gillett-Kaufman, J., **Gezan, S.**, and Buss, E. 2016. Association between *Blissus insularis* densities and St. Augustinegrass lawn parameters in Florida. *Crop, Forage, & Management* 1; doi: 10.2134/cftm2016.0015
- Martins, K., Kimura, R.K., Francisconi, A.F., **Gezan, S.**, Kainer, K., and Christianini, A.V. 2015. The role of very small fragments in conserving genetic diversity of a common tree in a hyper fragmented Brazilian Atlantic forest landscape. *Conservation Genetics*; doi: 10.1007/s10592-015-0800-7
- Nazarian, A., and **Gezan, S.** 2016. GenoMatrix: a software package for pedigree-based and genomic prediction analyses on complex traits. *Journal of Heredity* 107(4):372-379; doi:10.1093/jhered/esw020
- Orsborne, J., DeRaedt Banks, S., Hendy, A. **Gezan, S.A.**, Kaur, H., Wilder-Smith, A., Lindsay, S.W., and Logan, J.G. 2016. Personal protection of permethrin-treated clothing against *Aedes aegypti*, the vector of Dengue and Zika virus, in the laboratory. *PLoS One* 11(5):e0152805; doi:10.1371/journal.pone.0152805
- Pádua, J.M.V., Das Graças Dias, K.O., Pastina, M.M., de Souza, J.C., Quiroz, V.A.V., de Costa, R.V., da Silva, M.B.P., Ribeiro, C.A.G., Guimares, C.T., **Gezan, S.A.**, and Guimares, L.J.M. 2016. A multi-environment trials diallel analysis provides insights on the inheritance of fumonisin contamination resistance in tropical maize. *Euphytica* 211: 277; doi:10.1007/s10681-016-1722-2
- Sasson, D.A., Munoz, P.R., **Gezan, S.A.**, and Miller, C.W. 2016. Resource quality affects weapon and testis size and the ability of these traits to respond to selection in the leaf-footed cactus bug, *Narnia femorata*. *Ecology and Evolution* 6:2098–2108; doi:10.1002/ece3.2017
- Bentley, M.T., Oi, F.M., **Gezan, S.A.**, and Hahn, D.A. 2015. Tunneling performance increases at lower temperatures for *Solenopsis invicta* (Buren) but not for *Nylanderia fulva* (Mayr). *Insects* 6:686-695
- Carnohan, L.P., Kaufman, P.E., Allan, S.A., **Gezan, S.A.**, and Weeks, E.N.I. 2015. Evaluation of four bed bug traps for surveillance of the brown dog tick (*Acaris Ixodidae*). *Journal of Medical Entomology* 52(2):260-268; doi: 10.1093/jme/tju020
- DeRaedt Banks, S., Orsborne, J., **Gezan, S.A.**, Kaur, H., Wilder-Smith, A., Lindsey, S.W., and Logan, J.G. 2015. Permethrin-treated clothing as protection against the Dengue vector, *Aedes aegypti*: extent and duration of protection. *PLoS Neglected Tropical Diseases* 9(10):e0004109. doi:10.1371/journal.pntd.0004109
- Fernández-Grandon, G.M., **Gezan, S.A.**, Armour, J.A.L., Pickett, J.A., and Logan, J.G. 2015. Heritability of attractiveness to mosquitoes. *PLoS ONE* 10(4):e0122716; doi:10.1371/journal.pone.0122716
- García-Villacorta, A.M.ª, Jokela, E.J., Cropper, W.P. **Gezan, S.A.**, and Martin, T. 2015. Variation in biomass distribution and nutrient content in loblolly pine (*Pinus taeda* L.) clones having contrasting crown architecture and growth efficiency. *Forest Ecology and Management*. 342: 94-92
- Gilbert, J.L., Guthart, M.J., **Gezan, S.A.**, Pisaroglo de Carvalho, M., Schwieterman, M.L., Colquhoun, T.A., Bartoshuk, L.M., Sims, C.A., Clark, D.G. and Olmstead, J.W. 2015. Identifying breeding priorities for blueberry flavor using biochemical, sensory and genotype by environment analyses. *PLoS ONE* 10(9):e0138494; doi:10.1371/journal.pone.0138494
- Gungeet J., **Gezan, S.**, Stopka, C., Pigg, M., and Tillman, M. 2015. College students as informal caregivers and their attitude toward their older relatives. *The International Journal of Aging and Society* 5(4):47-60

- Hottel, B.A., Pereira, R.M., **Gezan, S.A.**, Qing, R., Sigmund, W.M., and Koehler, P.G. 2015. Climbing ability of the common bed bug (Hemiptera: Cimicidae). *Journal of Medical Entomology* 52(3):289-295
- Jiang, L., Clavijo, J.A., Sun, L., Zhy, X., Bhakta, M.S., **Gezan, S.A.**, Carvalho, M.P., Vallejos, C.E., and Wu, R. 2015. Plastic expression of heterochrony quantitative trait loci (hQTLs) for leaf growth in the common bean (*Phaseolus vulgaris*). *New Phytologist* 207(3):872-882
- Nazarian, A., and **Gezan, S.A.** 2015. Integrating nonadditive genomic relationship matrices into the study of genetic architecture of complex traits. *Journal of Heredity*; doi: 10.1093/jhered/esv096
- Soares, C.P.B., **Gezan, S.A.**, da Silva, G.F., and Castro, R.V.O. 2015. Individual-tree growth and mortality models for semideciduous Atlantic forest in Brazil. *Australian Journal of Basic and Applied Sciences* 9(11):542-552
- Zhai, L., Jokela, E.J., **Gezan, S.A.**, and Vogel, J.G. 2015. Family, environment and silviculture effects in pure- and mixed-family stands of loblolly (*Pinus taeda* L.) and slash (*P. elliottii* Engelm. var. *elliottii*) pine. *Forest Ecology and Management* 337:28-40
- Zhang, J., Peter, G.F., Powell, G.L., White, T.L., and **Gezan, S.A.** 2015. Comparison of breeding values estimated between single-tree and multiple-tree plots for a slash pine population. *Tree Genetics & Genomes* 11:48; doi 10.1007/s11295-015-0870-1
- Gonzalez-Beneke, C.A., **Gezan, S.**, Albaugh, T.J., Allen, H.L., Burkhart, H.E., Fox, T.R., Jokela, E.J., Maier, C.A., Martin, T.A., Rubilar, R.A., and Samuelson, L.J. 2014. Local and general above-stump biomass functions for loblolly pine and slash pine trees. *Forest Ecology and Management* 334:254-276
- Gonzalez-Beneke, C.A., **Gezan, S.**, Martin, T., Cropper Jr., W., Samuelson, L., and Leduc, D. 2014. Individual tree diameter, height and volume functions for longleaf pine. *Forest Science* 60:43-56
- Gonzalez-Beneke, C.A., **Gezan, S.**, Samuelson, L., Cropper Jr., W., Leduc, D., and Martin, T. 2014. Estimating *Pinus palustris* tree diameter and stem volume from tree height, crown area and stand-level parameters. *Journal of Forestry Research* 25:43-52
- Gungeet J., **Gezan, S.**, Delisle, T., Stopka, C., Pigg, M., and Tillman, M. 2014. Intentions of college students to serve as informal caregivers for their older relatives: Theory of planned behavior approach. *Educational Gerontology* 41:384-396
- Munoz, P., Resende, M.F.R., **Gezan, S.**, Resende, M.D.V., de los Campos, G., Kirst, M., Huber, D., and Peter, G.F. 2014. Unraveling additive from non-additive effects using Genomic Relationship Matrices. *Genetics* 198:1759-1786
- Pisaroglo de Carvalho, M., Peternelli, L., Barbosa, M., and **Gezan, S.** 2014. Estimation of additive and non-additive genetic components of sugarcane families using multitrait analysis. *Agronomy Journal* 106:800-808
- Quesada, T., Resende, M., Munoz, P., Wegrzyn, J.L., Neale, D.B., Kirst, M., Peter, G.F., **Gezan, S.**, Nelson, D., and Davis, J. 2014. Mapping fusiform rust resistance genes within a complex mating designs of loblolly pine. *Forests* 2014:347-362
- Silva, G.A.P., **Gezan, S.A.**, de Carvalho, M.P., Gouvêa, L.R.L., Verardi, C.K., Oliveira, A.B., and Gonçalves, P.S. 2014. Estimation of genetic parameters in a rubber tree population: heritabilities, genotype-by-environment interactions and multitrait correlations. *Tree Genetics & Genomes* 10(6):1511-1518
- Sulston, E., Wardhana, A.H., Hall, M.J.R., Logan, J.G., **Gezan, S.A.**, and Cameron, M.M. 2014. Combining cattle and wound-derived synthetic attractants, POC and Bezzilure, for sampling *Chrysomya bezziana* in Indonesia. *Acta Tropica*; <http://dx.doi.org/10.1016/j.actatropica.2014.04.017>
- Weeks, E.N.I., Davies, C., Cordon-Rosales, C., Yeo, M., **Gezan, S.**, Parra-Henao, G. and Cameron, M.M. 2014. Community-based sampling methods for surveillance of the Chagas disease vector, *Triatoma dimidiata* (Hemiptera: Reduviidae: Triatominae). *Journal of Medical Entomology* 51(5):1035-1042
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- Weeks, E.N.I., Cordon-Rosales, C., Davies, C., **Gezan, S.**, Yeo, M., and Cameron, M.M. 2013. Risk factors for domestic infestation by the Chagas disease vector, *Triatoma dimidiata* in Chiquimula, Guatemala. *Bulletin of Entomological Research* 103:634-643
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- Kehel, Z., Habash, D.Z., **Gezan, S.A.**, Nachit, M.M., and Welham, S.J. 2010. Estimation of spatial trend and automatic model selection in augmented designs. *Agronomy Journal* 102:1542-1552
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- Gezan, S.**, Moreno, P., and Ortega, A. 2009. Modelos fustales para renovales de roble, rauli y coigue en Chile [Taper models for roble, rauli and coigue second growth forests in Chile]. *Bosque* 30:61-69 (In Spanish)
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- Gezan, S.A.**, and Carvalho, M.<sup>P</sup> (*In press*). Analysis of repeated measures for the biological and agricultural sciences. Book Chapter. In: *Applied Statistics in Agricultural, Biological, and Environmental Sciences*. Glaz, B., and Yeater, K.M. (eds.). American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, Inc.
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- Tseng, Y.-C., Tillman, B., **Gezan, S.**, Wang, J., and Rowland, D.L. (*In press*). Heritability of spotted wilt resistance in a Florida-EP<sub>TM</sub> '113' derived peanut population. *Plant Breeding*.

(*Books*)

- Welham, S., **Gezan, S.**, Clark, S., and Mead, A. 2014. *Statistical Methods in Biology: Design and Analysis of Experiments and Regression*. Chapman and Hall/CRC. 608p.

(*Book Chapters*)

- Stringer, J.K., Atkin, F.C., and **Gezan, S.A.** 2017. Statistical Approaches in Plant Breeding: Maximising the Use of the Genetic Information. Book Chapter. In: *Genetic Improvement of Tropical Crops*. Campos, H., and Caligari (eds.). Springer. 3-17.

#### **Lectures Presented at Professional Conferences (since 2012):**

- Gezan, S.A.** Integrating genomic selection into a strawberry breeding program. XXI Simposio Internacional de Atualizacao em Genetica e Melhoramento de Plantas: Genetica Quantitativa e suas Interfaces no Melhoramento. University of Lavras, Lavras, Brazil. November 8-10, 2017 (*Invited speaker*)
- Gezan, S.A.** Linear models for plant scientist with ASReml-R. American Society of Agronomy Workshop. Tampa, FL. October 23, 2017 (*Organizer and Presenter*)
- Gezan, S.A.**, Osorio, L.F., Verma, S., and Whitaker, V. Potential impacts of the use of genomic selection in strawberry. RosBREED 2017 Participant Meeting. Lansing, MI. March 7-9, 2017 (*Contributed speaker*)
- Gezan, S.A.** Extending genome-wide association studies (GWAS) to multi-environment trial analyses. North American Quantitative Genetics Meeting. Melbourne, FL. June 19, 2017 (*Organizer and Presenter*)

- Gezan, S.A.**, Weeks, E.N.I., Vann, J.A., and Saylor, K. Utilizing genotyping data to increase understanding of white tailed deer genetics, pathogen transmission, and beyond! Cervidae Health Research Initiative 1<sup>st</sup> Annual Science Symposium. Gainesville, FL. March 28, 2017 (*Contributed poster*)
- Gezan, S.A.** Genetic improvement for blueberry flavor using biochemical, sensory, and genotype-by-environment analyses. 6th International Workshop in Advances in Science and Technology of Bioresources. Universidad de la Frontera, Pucon, Chile. November 29-30, 2017 (*Invited speaker*)
- Gezan, S.A.** Curso: Modelos mixtos aplicados a la investigacion agropecuaria usando software R [Linear mixed modes applied to the agricultural research using the R software Workshop]. INIA Carillanca, Temuco, Chile. November 27, 2017 (*Organizer and Presenter*)
- Gezan, S.A.** Incorporando seleccion genomica en in programa de mejoramiento genetico de frutilla. [Integrating genomic selection into a strawberry breeding program]. INIA Quilamapy. Chillan, Chile, November 22, 2017 (*Invited speaker*)
- Gezan, S.A.** Optimización del diseño y análisis de experimentos para el mejoramiento genético [Optimization of the design and analysis of experiments for genetic improvement]. INIA Quilamapy. Chillan, Chile, August 10, 2016 (*Invited speaker*)
- Gezan, S.A.** Explorando la implementación de la selección genómica [Exploring the implementation of genomic selection]. INIA Quilamapy. Chillan, Chile, August 10, 2016 (*Invited speaker*)
- Gezan, S.A.** Implementing genomic selection in plant breeding programs. American Society of Agronomy Workshop. Phoenix, AR. November 7, 2016 (*Organizer and Presenter*)
- Gezan, S.A.** and Swift, B. Selective breeding programs for aquaculture in British Columbia, Canada. Fish Breeders's Round Table 2016. Tromso, Norway. June 13-15, 2016 (*Presenter*)
- Gezan, S.A.** Bringing genotypic data closer to phenotypic data in crop modelling. Gene-based Crop Modeling Workshop organized by IRRI. University of Florida, Gainesville, FL. November 1-3, 2016 (*Invited speaker*)
- Gezan, S.A.** and Nazarian, A. Integrating non-additive genomic relationship matrices into the study of genetic architecture of complex traits. 2015 ASA, CSSA, and SSA Annual Meeting in Minneapolis, MN. Nov 14-19, 2015 (*Contributed speaker*)
- Gezan, S.A.** Experimental designs for plant scientists. NSF Workshop: Merging Crop Modelling and Genetics. Gainesville, FL. July 19-25, 2015 (*Organizer and Presenter*)
- Gezan, S.A.** Analysis of designs with complex structure. NSF Workshop: Merging Crop Modelling and Genetics. Gainesville, FL. July 19-25, 2015 (*Organizer and Presenter*)
- Gezan, S.A.** Linear mixed models. NSF Workshop: Merging Crop Modelling and Genetics. Gainesville, FL. July 19-25, 2015 (*Organizer and Presenter*)
- Gezan, S.A.** Introduction to quantitative genetics. NSF Workshop: Merging Crop Modelling and Genetics. Gainesville, FL. July 19-25, 2015 (*Organizer and Presenter*)
- Gezan, S.A.** Detecting QTLxE and incorporating environmental predictors. NSF Workshop: Merging Crop Modelling and Genetics. GNV, FL. July 19-25, 2015 (*Organ. and Presenter*)
- Gezan, S.A.** ASReml-R: Analysis of breeding trials. American Society of Agronomy Workshop. Minnesota, MN. November 14, 2015 (*Organizer and Presenter*)
- Gezan, S.A.** Introduction to genomic selection in ASReml. North American Quantitative Genetics Meeting. Clemson University, Conference Center, Clemson, SC. June 10, 2013 (*Organizer and Presenter*)
- Gezan, S.A.** Applications of mixed models in forest growth modelling and breeding value prediction. Instituto Florestal de São Paulo (IFSP). São Paulo, Brazil. August 28, 2013 (*Invited speaker*)
- Gezan, S.A.** Dealing with a binary trait in biological studies. Invited Speaker. CIRAD. Montpellier, France. December 20, 2012 (*Invited speaker*)
- Gezan, S.A.** Exploiting mixed model methodology to combine different sources of information. CIRAD. Montpellier, France. December 20, 2012 (*Invited speaker*)
- Gezan, S.**, Quesada, T., and Davis, J. Understanding rust data? Dealing with a binary trait. IEG-40 Meeting. Asheville, NC. June 13-15, 2012 (*Invited speaker*)
- Gezan, S.A.**, and Carvalho, M. Modelling and predicting inter-tree competition among different slash families. SOMENS (Southern Mensurationists) 2012 Annual Meeting. Jacksonville, FL. October 7-9, 2012 (*Contributed speaker*)

**Graduate Committee:** Chair Ph.D. (2 students), Chair Master (4),  
Member Ph.D. (25), Member Master (5)

**Journal Editor:** Agronomy Journal (Associate Editor, Biometrics Section) (June 2015- June 2017)  
Chilean Journal of Agricultural Research (Associate Editor) (Nov. 2017- present)

**Journals Reviewed:** Agronomy Journal, BMC Genomics, Canadian Journal of Forest Research, Computers and Electronics in Agriculture, Conservation Genetics, Crop Breeding and Applied Biotechnology, Euphytica, Forest Ecosystems, Forests, Forest Science, Genetics, Heredity, IAWA, JABES, Scientia Agricola, Theoretical & Applied Genetics, Tree Genetics & Genomes

**Computer Skills:** ASReml, SAS, R, GenStat, Systat, CycDesigN, MatLab, Visual Basic, Fortran

**Language Proficiency:** Spanish (native language), English (fluent speaking, reading, writing)

**Professional Affiliations:** American Society of Agronomy (ASA)  
American Statistical Association (ASA)  
Royal Statistical Society (RSS)

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